Division of Water Resources / State Revolving Fund Loan Program
William R. Snodgrass TN Tower, 12th Floor
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FINDING OF NO SIGNIFICANT IMPACT
Approval of Facilities Plan
Cleveland (Bradley County), Tennessee
Loan No. DWF 2016-172

May 4, 2016

The National Environmental Policy Act requires federally designated agencies to determine whether a proposed major agency action will significantly affect the environment. One such major action, defined by the Safe Drinking Water Act (SDWA), is the approval of a facilities plan prepared pursuant to EPA 816-R-97-005, Final Guidelines. In making this determination, the State Revolving Fund Loan Program assumes that all facilities and actions recommended by the plan will be implemented. The State's analysis concludes that implementing the plan will not significantly affect the environment; accordingly, the State Revolving Fund Loan Program is issuing this Finding of No Significant Impact (FNSI) for public review.

The City of Cleveland has completed the facilities plan entitled "North-South Water Main" dated February 2016. The facilities plan provides recommendations for extending the water distribution system serving existing customers in the southern service area of Cleveland (Bradley County), Tennessee. The proposed project consists of the installation of approximately 27,150 linear feet (LF) of 24-inch diameter waterline along Old Charleston Road, beginning at the intersection of Tasso Lane heading north to North Lee Highway, continuing along North Lee Highway to the intersection of Lauderdale Highway where the waterline will turn east toward Dry Valley Road, and ending at the Hiwassee Utilities Commission Water Treatment Plant. The total estimated project cost is $3,725,500. A Drinking Water State Revolving Fund (DWSRF) loan in the amount of $3,725,500 has been requested for this project.

Attached is an Environmental Assessment containing detailed information supporting this action. Comments supporting or disagreeing with this proposed action received within 30 days of the date of this FNSI will be evaluated before we make a final decision to proceed.

If you wish to comment or to challenge this FNSI, send your written comment(s) to:

Mr. Sam R. Gaddipati, Environmental Manager
Division of Water Resources, State Revolving Fund Loan Program
William R. Snodgrass TN Tower, 12th Floor
312 Rosa L. Parks Avenue, Nashville, TN 37243

or call or e-mail (615) 532-0462 or sam.gaddipati@tn.gov.

ENVIRONMENTAL ASSESSMENT

Approval of Facilities Plan
Cleveland (Bradley County), Tennessee
Loan No. DWF 2016-172

May 4, 2016

A. PROPOSED FACILITIES AND ACTIONS; FUNDING STATUS

The City of Cleveland has completed the facilities plan entitled "North-South Water Main" dated February 2016. The facilities plan provides recommendations for extending the water distribution system serving existing customers in the southern service area of Cleveland (Bradley County), Tennessee. The proposed project consists of the installation of approximately 27,150 linear feet (LF) of 24-inch diameter waterline along Old Charleston Road, beginning at the intersection of Tasso Lane heading north to North Lee Highway, continuing along North Lee Highway to the intersection of Lauderdale Highway where the waterline will turn east toward Dry Valley Road, and ending at the Hiwassee Utilities Commission Water Treatment Plant. The facilities planning area and project location are indicated on Figure Nos. 1 and 2 of this Environmental Assessment.

FUNDING STATUS

The facilities described above comprise the scope of Loan No. DWF 2016-172 scheduled for funding in fiscal year 2016. The estimated project costs are summarized in the following tabulation:

PROJECT CLASSIFICATIONS	COSTS ($)
Administrative & Legal	10,000
Land Costs & Appraisals	45,000
Planning Fees	9,000
Design Fees	10,000
Engineering Basic Fees	25,000
Other Engineering Fees	46,000
Construction	3,255,000
Contingencies	325,500
TOTAL	**3,725,500**
Drinking Water State Revolving Fund (DWSRF) Loan	3,725,500

A DWSRF loan in the amount of $3,725,500 has been requested for this project.

B. EXISTING ENVIRONMENT

The City of Cleveland's Planning Area is located in Bradley County in east Tennessee. A discussion of existing environmental features in the area includes the following:

SURFACE WATERS

Surface waters within the planning area include the Hiwassee River, Candies Creek, Mouse Creek and their associated tributaries. Designated uses for Hiwassee River are domestic water

supply, industrial water supply, irrigation, navigation, recreation, livestock watering, and fish/aquatic life. Raw water for the City of Cleveland's water treatment plant (WTP) and Hiwassee Utilities Commission's (HUC) WTP is obtained from the Hiwassee River.

GROUNDWATER

Residents in the rural areas of Cleveland obtain their drinking water from wells. Groundwater in the planning area occurs primarily in fractures of calcareous rocks. This area is primarily underlain by the Conasauga shale and may provide well yields more than 100 gallons per minute. The quality of the ground water is generally good. Waterville Springs WTP (another source of water supply) withdraws ground water for Cleveland's drinking water.

SOILS

The predominant soil association occurring in the planning area is the Fullerton Soils. Fullerton Soils are deep, gently sloping to steep, cherty, well-drained soils that were formed from the residuum of limestone. These soils are typically very light, yellowish-gray, gravelly (chert) silt loams with yellow to reddish-brown silt loam subsoils. The capacities of the limiting layer of soil to transport water ranges from low to moderately high.

TOPOGRAPHY

The planning area lies in the Valley and Ridge Province and consists of alternating ridges and valleys. The average elevation in the planning area is 980 feet above mean sea level, and is characterized by mild to steep slopes.

OTHER ENVIRONMENTAL FEATURES

No wild or scenic rivers or unique agricultural, scientific, cultural, ecological, or natural areas were identified in the City of Cleveland's Planning Area.

C. EXISTING WATER FACILITIES

Cleveland's water treatment system consists of an 8.0 million gallons per day (MGD) WTP, a 1.4 MGD Waterville Springs WTP, and a distribution system. The Cleveland WTP constructed in 1954, withdraws water from the Hiwassee River. The Waterville Springs WTP constructed in 1938, draws water from Waterville Springs. Cleveland also operates the HUC WTP, which was constructed in 1982, and has a capacity of 15 MGD. Cleveland has a contract with HUC to purchase up to 9.7 MGD of water.

The distribution system, originally constructed in 1954, consists of approximately 750 miles of waterlines ranging from 3/4-inch to 24-inch diameter pipes, primarily consisting of cast iron pipe, ductile iron pipe (DIP), polyvinyl chloride (PVC) pipes, and ten water storage tanks with a total capacity of 15.3 million gallons.

The Waterville Springs WTP, which is the sole source of water for the customers in the southern sections of Cleveland, is aged and unable to fill the storage tanks in a timely fashion.

D. NEED FOR PROPOSED FACILITIES AND ACTIONS

The entire southern portion of Cleveland's Service Area obtain its water from the Elridge water storage tank. The aged Waterville Springs WTP is unable to fill the Elridge storage tank in

timely fashion causing the existing customers in the southern part of the service area experience low pressures and water shortages. To eliminate this situation the city of Cleveland proposed to construct a 24-inch diameter water line from the HUC WTP, so that the citizens in this community will have a contineous and reliable water on a regular basis.

Existing and projected facility conditions are shown in the following chart:

EXISTING AND PROJECTED FACILITY CONDITIONS

POPULATION	EXISTING (2016)	PROJECTED (2036)
City of Cleveland	42,000	50,000
Percent Served	100%	100%
Service Area Excluding Cleveland	63,000	75,000
Percent Served	60%	65%
Total Planning Area	105,000	125,000
Percent Served	76%	79%

WATER NEEDS (gpd)	EXISTING (Year)	PROJECTED (Year)
Residential	3,800,000	5,200,000
Commercial/Industrial	3,860,000	6,280,000
Unaccounted for Water	2,500,000	3,120,000
TOTAL	10,160,000	14,600,000

E. ALTERNATIVES ANALYSIS

Several alternatives were evaluated in the February 2016 Facilities Plan. Discussions of the evaluation of these alternatives and the recommended plan are following:

NO-ACTION

The No-Action approach is not a viable alternative because the customers in the service area will continue to experience water shortages and low pressures. Therefore this alternative is rejected.

CONNECTING TO HUC WTP USING NORTH LEE HIGHWAY ROUTE

This alternative is comprised of installing approximately 32,400 LF of 24-inch diameter water transmission main by the primary route of North Lee Highway. The water transmission main will start at the intersection of Old Tasso Place NE and Tasso Lane NE and continue to Jenkins Road towards North Lee Highway and Lauderdale Memorial Highway to connect to the HUC WTP. This was not the most cost-effective alternative and is rejected.

CONNECTING TO HUC WTP USING DRY VALLEY ROAD ROUTE

This alternative is comprised of installing approximately 28,100 LF of 24-inch diameter water transmission main along Dry Valley Road. The water transmission line will start at the intersection of Old Tasso Place NE and Tasso Lane NE and continue to Dry Valley Road to connect to the HUC WTP. This was not the most cost-effective alternative and is rejected.

CONNECTING TO HUC WTP USING OLD HARLESTON ROAD

This alternative is comprised of installing approximately 27,150 LF of 24-inch diameter transmission main along Old Charleston Road, beginning at the intersection of Tasso Lane heading north to North Lee Highway, continuing along North Lee Highway to the intersection of Lauderdale Highway where the waterline will turn east toward Dry Valley Road, and ending at the HUC WTP. This was the most cost-effective alternative and is selected.

F. ENVIRONMENTAL CONSEQUENCES; MITIGATIVE MEASURES

The environmental benefits of this project will be the improvement of water supply conditions in the area and improvement to public health by availability of water without shortages, as well sufficient pressure.

During the construction phase, short-term environmental impacts due to noise, dust, mud, disruption of traffic, runoff of silt with rainfall, etc., are unavoidable. Minimization of these impacts will be required; however, many of these minimization measures will only be temporary. Using the following measures to prevent erosion will minimize impacts on the environment:

1. Specifications will include temporary and permanent measures to be used for controlling erosion and sediment.
2. Soil or landscaping maintenance procedures will be included in the specifications.

The contractor will develop an Erosion Control Plan. It should contain a construction schedule for each temporary and permanent measure controlling erosion and sediment. It should include the location, type, and purpose for each measure and the times when these measures, along with requiring the contractor to return the construction site to as-good-as or better-than its original condition, will prevent any adverse impacts due to erosion.

G. PUBLIC PARTICIPATION; SOURCES CONSULTED

A Public Meeting was held on January 14, 2016, 6:00 p.m., local time. The selected plan for water distribution and user charges were described to the public, and their input was received. This agency is not aware of any unresolved public objections that may have been voiced before or after the public meeting regarding this project.

Sources consulted about this project for information or concurrence were:

1. Tennessee Department of Agriculture
2. Tennessee Department of Economic and Community Development (ECD)
3. Tennessee Department of Environment and Conservation (TDEC), Division of Air Pollution Control (DAPC)
4. Tennessee Department of Transportation (TDOT)
5. Tennessee Historical Commission
6. TDEC, Division of Archaeology (DA)
7. Tennessee Geological Survey
8. TDEC, Division of Solid Waste Management (DSWM)
9. TDEC, Division of Water Resources (DWR)
10. Tennessee Wildlife Resources Agency (TWRA)
11. United States Army Corps of Engineers (USACE)
12. United States Fish and Wildlife Service (USF&W)
13. Cleveland Utilities
14. Bradley County
15. Stantec Consulting Services, Chattanooga, TN

H. SPECIAL CONDITIONS

The State Revolving Fund loan agreement will have the following special conditions:

1. Cleveland shall obtain applicable Section 10/404 Permits from the U. S. Army Corps of Engineers to meet the requirements of wetlands protection and stream-crossing statutes. A letter from the Corps stating that the permits are not needed will obviate this requirement.
2. Cleveland will need to obtain an Aquatic Resources Alteration Permit (ARAP) utilities crossing general permit as there will be a stream crossing at the unnamed tributary that flows into the Hiwassee River near Dry Valley Road and the Hiwassee Utilities Commission Water Treatment Plant. This permit will be handled by the DWR Chattanooga Environmental Field Office.
3. Cleveland will need to coordinate with the TN Wildlife Resources Agency (TWRA) to conduct an environmental survey for the endangered species Conasauga Blue Burrower Crayfish (Cambarus cymatilis). If the species is found, the loan applicant shall coordinate with TWRA to minimize potential adverse impacts. Please contact Mr. Robert Todd at 615-781-6572 or rob.todd@tn.gov for further information.